

## ABSTRACT

The present invention provides bumpless ultrasonic bonding of flexible wiring board pieces.

5           A metal coating 26 is formed on the surface of a contact region 18<sub>1</sub> of a metal wiring 28 of each of two flexible wiring board pieces 10, 30 and ultrasonic wave is individually applied by an ultrasonic resonator 45 to the contact regions 18<sub>1</sub> in contact with each other. The metal coatings 26 are bonded to form a multilayer flexible wiring  
10 board 50. The bumpless process eliminates any plating step for forming bumps without being influenced by non-uniformity bump height. A thermoplastic resin film 33 may be formed on the surface of one flexible wiring board piece 30 to bond flexible wiring board pieces 10, 30 by the adhesion of the resin film 33.

15